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Epic Dynasty

Homebuilt morphs
into certified hot rod

Dynasty in the Making

by Lauran Paine Jr.

When the opportunity arose to check out the new Epic Dynasty aircraft, I said, "Sure. It'll be fun." What I didn't appreciate at the time was just how much fun it would be. I met with friendly, smart and enthusiastic people and their airplane is, in one word, magnificent.

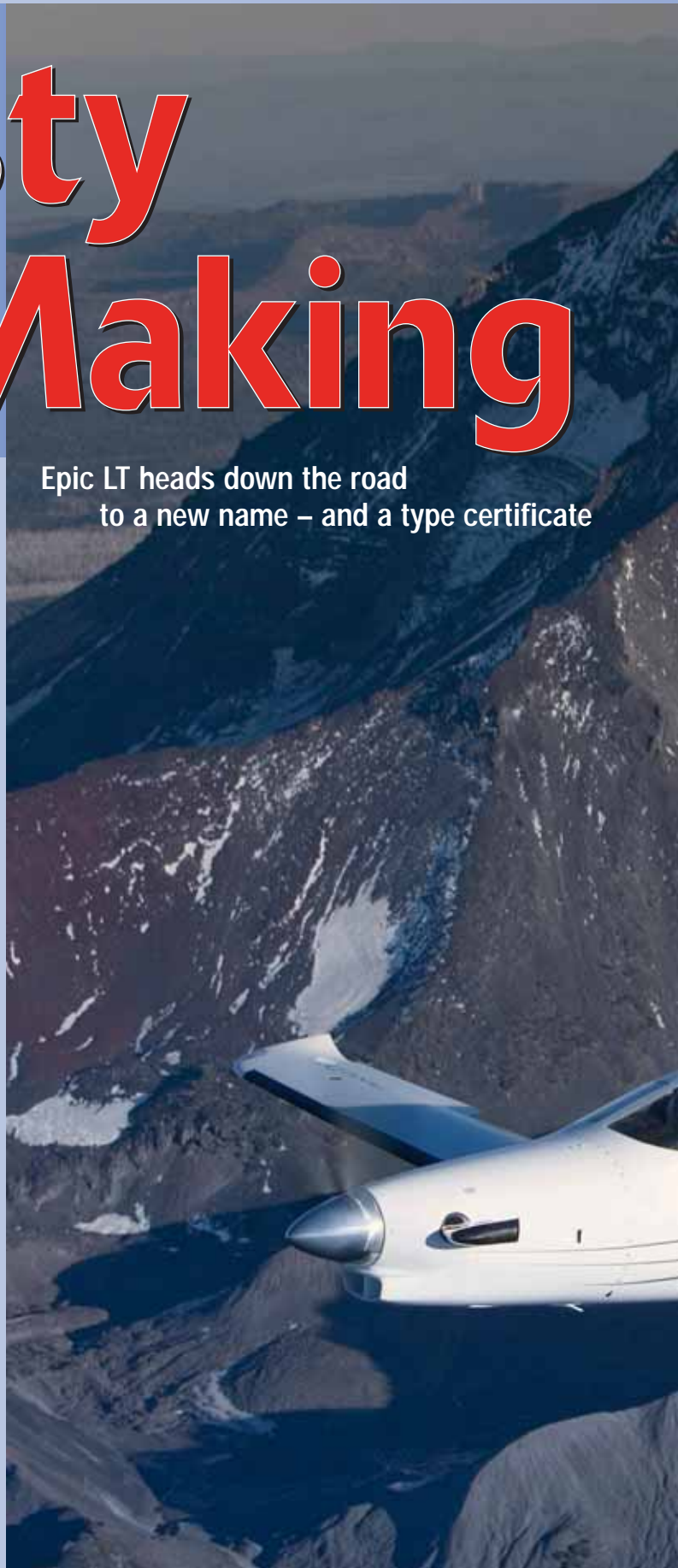
Prior to the appointed time I was to meet the people at Epic, I was pattering in my hangar at the Salem, Ore., airport. I heard an airplane, looked up and what should appear but an Epic LT, the genesis for the Epic Dynasty. I watched four guys deplane and go into the airport restaurant for lunch. While they were eating I walked over to the aircraft and checked it out some. This was an unscheduled, unfettered introduction to the Epic LT. It has, my friends, what you would call "pizzazz." In spades.

I never introduced myself to the crew, just walked back to my hangar. First impression: The Epic LT is sexy and built to cruise.

The first questions on your mind: How fast? How far? How high? Engine? How many seats? How much? Those are all good questions. The answers: 340 KTAS, 1800 nm, 31,000 feet, PT-6, six, and \$1.95 mil.

There are some caveats to those numbers. The range at max cruise (340 KTAS) is around 1200 nm; to get the maximum range of 1800 nm you need to pull it back to an economy cruise speed of 280 KTAS and have the optional long range tanks. More stuff: the max payload with full fuel is 1350 pounds, takeoff distance is 1600 feet and landing distance is 1850 feet.

Epic LT heads down the road
to a new name – and a type certificate





Most of these figures are maximums but few people use their airplanes to the maximum. Plug the figures into *your* usage to see how the airplane fits you. Bottom line, do your homework and you'll quickly see that, for the performance and price, there's nothing else quite like it – including the VLJs, which cost more to purchase and operate. Chew on all that for awhile while I tell you about the genesis of the company.

Roots

That Epic LT I saw at my airport was the beginning of the Dynasty. The Epic is a kit-built airplane. An amateur-built experimental. A composite, pressurized, fast, six-seat, 7300-pound turboprop amateur-built experimental from a kit. How's that for a mouthful?

Don't be scared by all that: I built an airplane from a kit, an RV-8. Since I built it, I can maintain it but can't use it for hire. Because of its sophistication, the Epic LT is no RV-8, so Epic established a Builder Assistance Center. You build your LT at the factory, using

their equipment and expertise. You spend a minimum of 10 days a month for 38 weeks building your airplane. (If that sounds like a lot of time, consider this: It took me seven years to build my airplane.) That qualifies your airplane, under the 51-percent homebuilding rule, as an amateur-built experimental. Better yet, you get all of the previously mentioned performance for \$1.25 mil. The added benefit is that you really *know* your airplane.

But homebuilding – or even builder-assist center building – isn't for everybody, so here's the switch. Make the same airplane a factory-built and fully certificated model. You can buy it in working condition and you can use it for hire, though maintenance must be by an A&P mechanic. The Epic LT now becomes the Epic Dynasty. It now costs more, of course, because certification costs money. Quite a bit of it, actually. But for that money your hands stay clean, colleagues no longer see the big word "Experimental" on your airplane, and you get the business benefits of increased utilization.

Behind the Design

A company is defined by its people, and the company behind an airplane is important because when you buy an airplane you're also buying into the company.

All airplanes begin as an idea. Enter Rick Schramek, chairman and CEO. Rick's father flew P-51s and B-25s in WWII, flew in Korea and closed his career flying C-47 gun ships in Vietnam. The aviation seed was planted at an early age.

But first Rick worked in the high-tech industry, eventually becoming president and CEO of VEReCOMM, a communications software group. After that, he asked himself, "Now what?" He had his aviation ratings and had built an airplane, but he also liked fast cars. Then and now, he felt the need for speed. So he flipped a coin – literally – and it came up "airplanes." Epic AIR was born.

Mike Shealy is vice chairman. He and Rick go way back together in the high-tech work-a-day world.





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They're joined at the hip in their vision for Epic AIR. Rounding out the managing members is Jeff Sanders, an expert in starting, operating, growing and marketing

companies. Do you sense commitment and talent here? You should.

Rick, Mike and Jeff founded AIR, more formally known as Aircraft

Investor Resources, which is headquartered in Las Vegas, Rick's home. From that, Epic AIR, LLC was founded in 2003. Rick, long story short, then came to the airport in Bend, Ore – the recreation capital of Oregon – and built a big hangar/production facility he then set up for building the Epic LT. The building is not gaudy, just functional and purposeful, like the company. They've become profitable in three years. They have orders through 2013. How do you do that? It's not rocket science: good product and good service. Name me some other aviation companies that have become profitable in three years. Hint: the list is short.

Sitting just outside Rick's office are Alice Myers, marketing coordinator, and Françoise Labbe, marketing and relations manager. Beside Françoise's desk is Tuffy, her Boston Bull Terrier. Françoise, as you might imagine, is French. If you talk to her, have her say "aileron." It comes out "ail-e-roHn," the "roHn" forming deep in the larynx. Both are very nice as well





as being knowledgeable and enthusiastic about their company.

Dieter Koehler is vice president of engineering and certification. He has a masters degree in Aeronautical Science from the Technical University of Stuttgart. His thesis was related to composites. He worked at what is now Airbus Industries and Diamond Aircraft in Austria and, later, London, Ontario. From there he came to the United States to design and certify the Columbia 300 and then to Epic AIR. Bottom line: He's a very talented fellow.

Surrounding Dieter in a big room are several other engineers. One had a large, red Snap-On tool box sitting by his desk. An engineer with a tool box, I liked that a lot.

Allow me one more people-type anecdotes and then we'll tour the factory floor and go fly the airplane.

When I entered the building, there was no one at the front desk. A middle-aged man happened to walk in the room, vacuum cleaner in hand. He started to plug it in but then looked up and asked, "Have you been helped?" I said, "Not yet." With that, he went into another room and got someone to help me. That encounter set the tone for me: Everybody at Epic seems to care about the customer and the company. Nice feeling.

On the Floor

Introductions complete, we went out into the production facility for the LT. The molds are big. The fuselage is formed in halves and the wing spar goes from wing tip to wing tip. A pre-impregnated epoxy is used in the molds. That is then "baked" in a giant oven at 270 degrees F. That's not hot enough for brownies but plenty good enough for an airplane. That's the short course in building composite

parts for an airplane; if you want the long course, call Dieter.

From there the formed parts are jigged and assembled and moved on down the line for systems installation, instrument panel assembly, interiors, engine installation, paint and then out into the back room for final inspection before flight. The builder/owner participates in the process the whole way. I'll talk a little later of the process planned for the certificated Dynasty airplane. But for now, since we just built its cousin, the LT, let's go fly.

Now, I'll tell you right now, I'm not fond of flying airplanes I know nothing about. In military and airline careers I've always attended ground schools and flight training preparatory to qualifying in an airplane. That said, it is a testament to this airplane that I felt fairly comfortable, fairly fast. I do not



pretend, however, to be qualified in it. I've long been of the belief that you never really know an airplane until you've flown it a year, through all the seasons. That off my chest, I'll say I did get to *experience* the Epic LT.

Before flying, I spoke at length with Peter Stiles, Epic AIR pilot. His enthusiasm for the airplane rubbed off on me. I then flew with Chief Pilot Mike Hooper. And I'll tell you up front: I was impressed with the performance of the airplane.

Flying the Epic

The preflight is straightforward. It's a clean airplane. A very clean airplane. This airplane turns heads on the ramp. It was built to go high and fast in comfort, and that's what it does.

Starting the turbine engine is, well, like starting a turbine engine: get it turning, put some fuel in and ignite it. (Short course, again.) Right away you feel the sinew. Even when it's idling, this baby wants to *run*. Cockpit visibility is excellent,

both forward over the nose and, with the sweeping side windows, out the side, too. I won't say much about instrumentation/avionics because the builder of each of these kit-built models configures the aircraft differently. The airplane we flew was equipped with the Chelton Systems glass panel. The company has not yet said what brand glass panel the certified Dynasty will sport.

Steering for taxi is through a direct mechanical linkage between rudder pedals and nose wheel. It takes a little pressure but it's very positive and without any slop. With a little practice it would be easy to become accustomed to.

Takeoff, with full fuel and the two of us, was brisk. Not having a clue as to how much torque was needed or how much pressure was needed on the rudder pedals, I wandered off the centerline a bit during the initial takeoff run. But, with the steering being as positive as it is, a steady, positive pressure brought it back to centerline. Here

again, with experience in the airplane, all that would become second nature. The interval during which nosewheel steering was important was brief, however. Right about the time I got the feel and put it back on centerline, we were at 90 KIAS and ready to rotate.

Rotate, positive rate, gear up. I put about seven degrees on the attitude indicator per Mike's suggestion and there we were, climbing at 3500 fpm at 160 knots. Then, almost as fast as you can say "hot little turboprop" we were at 17,500 feet msl. Yup, it flies like it looks: fast. Nice.

Okay, now just for a minute, throw out all the published numbers. We're flying, not dreaming and reading. I'm going to tell you what I saw: The groundspeed readout was 330 knots. And it didn't seem to matter which direction we flew – it was a relatively calm day. The airplane *goes!* I saw it with my own eyes.

Then we switched gears and did some slow flight. The airplane just motored along, all comfortable and smooth, at 65 knots indicated. We parlayed that into a straight ahead, dirty stall. A nice lady kept crooning in our Bose headsets, "Stall! Stall! Stall!" She crooned a long time before the airplane finally gave a gentle burble and stalled straight ahead, right around 58 knots indicated. I didn't push the nose over, just decreased back pressure and we were flying again. An efficient wing and horsepower are nice assets in such situations.

The aileron forces in my RV-8 are like a feather. (Different type airplane, I know.) So the Epic LT's ailerons (aka "ail-e-rOHns"), obviously, felt heavier. But here's what you get for that: Trim it up and it stays where you put it, hauling you where you want to go at 330 knots over the ground. That's what it's designed to do and that's what it does. I never turned on the autopilot during the flight. Didn't want to.

In the descent, we flattened the pitch of the prop. With that, you can come down just about any way your little heart desires: fast, slow, steep or gradual. It's nice to have that flexibility.

I flew an arc to the ILS. Gear speed is 160 knots and I flew final at 120 knots. This airplane can mix with any traffic, fast or slow. If you need to go fast, do so, then use the prop on short final to slow down; ATC will love you. I came over the numbers at 90 knots and started the flare at about 85. Not having a clue as to the sight picture, I felt a little high in the flare but the airplane ended up just rolling on the runway. That's not a testament to me but to the trailing link landing gear.

Presently, flight training is offered in Bend and is tailored to the customer. It comes complete with a systems and procedures ground school and flight training to standards. This training, to

include recurrent training, will continue to be a mainstay at Epic AIR because they believe not only in producing safe airplanes but in training safe pilots, too. Insurance companies recognize and love such training, that's how important and vital it is.

Certified Delivery

You want an Epic Dynasty, right? The reality of that decision is that you're going to have to wait a bit. Not long, just a bit. Certification is expected the second half of 2008 and, if you get your name in early, you can have a Dynasty to fly the first half of 2009.

Given the way most upstart aircraft manufacturers work, that sounds like an overly optimistic schedule. But Epic isn't like most upstarts. Here's how the company is going to do it.

Epic AIR is building a 100,000-square-foot production/completion facility at Springbank Airport in



Calgary, Alberta. Why Canada? Because Transport Canada announced the opening of the Canadian Center for Aircraft Certification (CCAC) to begin certifying high-technology general aviation aircraft using carbon-composite materials.

CCAC is located in Calgary and is a division of the Canadian Center for Aerospace Development, a wholly owned subsidiary of The Calgary Airport Authority. (A mouthful of words, I know.) CCAC will become a Transport Canada-accredited facility and Epic AIR is going to be its first, anchor tenant.

CCAC plans to use what it calls “a dynamic new regulatory model.” Read: The certification process will be more streamlined and cost effective. It sounds like they really are “here to help.” In answer to your next question, “Yes, Transport Canada and the Federal Aviation Administration have reciprocal certification standards.” You get U.S. certification at the same time you get Canadian certification. Win, win.

Thinking ahead, Epic AIR is evaluating five U.S. locations as service centers for their aircraft, to include recurrent flight training.



Product and support, the winning combination continues.

Want more? Epic AIR is also working to certify a VLJ of their own, called the Epic Elite. It'll be a twin jet for \$2.35 million. I saw the beginnings of one during my visit to Bend. It's slick. Epic also says it will announce two new airplanes during the coming air show season. Stay tuned.

Want a couple customer profiles? One guy sold his twin jet and built an LT. For the stage lengths he flies, he is just as fast for half the cost. Another sold his Conquest and got better performance for, again, less cost. As more and more people buy this airplane, you're going to hear more and more stories like these.

With the Epic Dynasty you get a beautiful composite airplane with turboprop reliability, that flies at near-jet speeds but has lower acquisition and operating costs, hauls six people above most all the weather in leather-upholstered comfort and, when you park it, everybody notices you.

After visiting, touring and flying, the Epic Dynasty is just what I said it was in the beginning: magnificent.



Epic Dynasty

SPECIFICATIONS

Price	\$1,950,000
Seats	6
Construction	Carbon fiber
Pressurization	6.5
Engine	Pratt & Whitney PT6-67A

Dimensions:

Length	35.8 ft.
Wingspan	43 ft.
Height	12.5 ft.
Wing area	203.6 sq. ft.
Cabin length	15 ft.
Cabin width	4.6 ft.
Cabin height	4.9 ft.

Weights:

Empty weight	4,000 lbs.
Maximum take-off weight	7,300 lbs.
Usable load with standard fuel	1,350 lbs.

Performance:

Maximum cruise	340 KTAS
Economy cruise	288 KTAS
Certified ceiling	28,000 ft.
Time to climb	9 minutes to 25,000 ft.
Range maximum cruise (with IFR reserves @ MTOW and optional long range tanks)	1,874 NM
Range maximum cruise (with IFR reserves @ MTOW)	1,200 NM
Take-off distance (over 50' obstacle)	1,600 ft.
Landing distance (over 50' obstacle)	1,840 ft.
Fuel capacity	288 gallons usable
Fuel capacity (optional long range tanks)	350 gallons usable